IN THE CLAIMS:

The following is a complete listing of the claims, reflects all changes currently being made thereto, and replaces all earlier version and listings.

1. (currently amended): An image processing apparatus for performing color adjustment for image data, comprising:

designating means for designating[[,]] a reference color, an adjusted color of the reference color, and an adjustment region in a color space, wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes ~~including~~ the reference color and the adjusted color~~, in a color space, wherein the color space has an interior, and wherein the designated adjustment region has a boundary within the interior of the color space~~;

region determining means for determining whether a pixel value of input image data is in the adjustment region; and

adjusted value calculating means for calculating an adjusted pixel value of the image data on the basis of a function of the reference color, the adjusted color and the boundary of the adjustment region, if said region determining means determines that the pixel value of the image data is in the adjustment region.

2. (original): The apparatus according to claim 1, wherein the adjustment region is defined as a geometric figure in the color space.

3. (original): The apparatus according to claim 2, wherein the geometric figure is an ellipsoid.

4. (original): The apparatus according to claim 2, wherein the geometric figure is a polyhedron.

5. (original): The apparatus according to claim 1, wherein said adjusted value calculating means calculates the adjusted value of the image data on the basis of an intersection of a straight line which connects the reference color and the image data, and the contour of the adjustment region.

6. (original): The apparatus according to claim 5, wherein said adjusted value calculating means calculates the adjusted value of the image data such that the adjustment amount linearly changes with respect to a distance between the image data and the reference color in the color space.

7. (original): The apparatus according to claim 5, wherein said adjusted value calculating means calculates the adjusted value of the image data such that the adjustment amount nonlinearly changes with respect to the distance between the image data and the reference color in the color space.

8. (original): The apparatus according to claim 1, wherein the image data is an element of a correction table for color matching.

9. (original): The apparatus according to claim 8, further comprising coordinate transforming means for transforming the image data into the coordinate system of a predetermined color space,

wherein said region determining means and said adjusted value calculating means each perform operations on the image data transformed into the predetermined color space.

10. (previously presented): The apparatus according to claim 9, wherein said designating means designates the reference color, the adjusted color and the adjustment region as values in said predetermined color space.

11. (original): The apparatus according to claim 9, wherein said coordinate transforming means inversely transforms the adjusted value, in the predetermined color space, calculated by said adjusted value calculating means, into the color space coordinate system of the image data.

12. (original): The apparatus according to claim 11, wherein said coordinate transforming means performs affine transformation and inverse transformation thereof.

13. (previously presented): The apparatus according to claim 9, further comprising:

transformation matrix calculating means for calculating, on the basis of the reference color, the adjusted color and the adjustment region, a transformation matrix used by said coordinate transforming means; and

matrix storage means for storing the transformation matrix.

14. (original): The apparatus according to claim 9, wherein

said region determining means further determines that image data is inside a rectangular parallelepiped region containing the adjustment region in the color space, and

if said region determining means determines that the image data is inside the rectangular parallelepiped region, said coordinate transforming means transforms the coordinates of the image data.

15. (currently amended): An image processing method of performing color adjustment for image data, comprising the steps of:

designating, a reference color, an adjusted color of the reference color, and an adjustment region in a color space, wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes ~~including~~ the reference color and the adjusted color~~, in a color space, wherein the color space has an interior, and wherein the designated adjustment region has a boundary within the interior of the color space~~;

determining whether a pixel value of input image data is in the adjustment region; and

calculating an adjusted pixel value of the image data on the basis of a function of the reference color, the adjusted color and the boundary of the adjustment region, if it is determined in the region determination step that the pixel value of the image data is in the adjustment region.

16. (currently amended): An image processing system for performing color matching based on a color correction table in an image processing apparatus in which a monitor and a printer are connected, wherein said image processing apparatus comprises:

designating means for designating, a reference color, an adjusted color of the reference color, and an adjustment region in a color space, wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes ~~including~~ the reference color and the adjusted color~~, in a color space, wherein the color space has an interior, and wherein the designated adjustment region has a boundary within the interior of the color space~~;

region determining means for determining whether a pixel value of input image data is in the adjustment region; and

adjusted value calculating means for calculating an adjusted pixel value of the image data on the basis of a function of the reference color, the adjusted color and the boundary of the adjustment region, if said region determining means determines that the pixel value of the image data is in the adjustment region.

17. (currently amended): A program, stored in a computer-readable storage medium, which performs color adjustment for image data and can be executed on a computer, comprising:

a code of a designation step of designating, a reference color, an adjusted color of the reference color, and an adjustment region in a color space, wherein the adjustment region has an interior portion and a boundary, wherein the adjustment region is contained within the color space such that the adjustment region is only a part of the color space, and wherein the adjustment region includes ~~including~~ the reference color and the adjusted color~~, in a color space, wherein the color space has an interior, and wherein the designated adjustment region has a boundary within the interior of the color space~~;

a code of a region determination step of determining whether a pixel value of input image data is in the adjustment region; and

a code of a adjusted value calculation step of calculating an adjusted pixel value of the image data on the basis of a function of the reference color, the adjusted color and the boundary of the adjustment region, if it is determined in the region determination step that the pixel value of the image data is in the adjustment region.

18. (original): A recording medium recording the program according to claim 17.